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An interview withPhillip Ely Church

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Q: This is an interview with Phillip Ely Church who has served with the foreign assistance program for how long?

CHURCH: Twenty-five years. I joined the Foreign Service in 1970s and retired in 1995.

Q: We'd like to start off with a little bit about where you grew up, your early education and work experience prior to joining the Foreign Service, and any particular orientation that would explain why you got into international development as opposed to something else. So, lead off.

Early education and career preparation

CHURCH: I grew up in Portland, Oregon and attended through high school there. (My high school made a little notoriety recently when it was selected as the setting for the movie, "Mr. Holland's Opus" which was released in 1996.) Portland is a nice west-coast town, a wonderful place in which to grow up. My sister and I were raised by a great set of parents who made every sacrifice necessary to assure we got the education we needed to succeed in life. I was the first in my extended family of aunts, uncles and cousins to finish college and the only one to go on and complete a Ph.D. degree.

I don't think I ever would have gotten involved in international development work if I hadn't gone on to college at the University of Chicago. I applied to a couple of local colleges in Oregon, but with encouragement from a very persuasive college recruiter, I also sent an application to the University of Chicago. For reasons that I can only believe now to be the University's effort to attract a more geographically diverse student body from around the country, I was awarded a scholarship so that I could go "back east" to school.

So, after graduating from high school in 1959 in Portland, Oregon, I got on a train with one trunk of books and one suitcase of clothes, and headed east across the country to college. When I arrived in Chicago two days later and made my way to the university campus in Hyde Park on the south side, I had a rude awakening. I was amongst a group of very well equipped undergraduates that had deigned to come west to college from the East Coast. I found it a real challenge to keep up with these classmates. To give an example, in our humanities "introduction to the arts" class, we were assigned to analyze pieces of symphonic music. Now I was doing good if I could come up with the symphony name, while my east coast classmates not only knew the symphony but could tell what orchestra was playing and who was conducting!

Despite my struggles to keep up in course work, Chicago student life provided an interesting exposure to the world in the decade of the '60s. Remember, this was the decade of the civil rights movement in the U.S. and of revolutions for independence in Africa and for freedom from dictatorial systems of government in Latin America and Asia. Much of sub-Saharan Africa during that period was moving from colonial status under the European powers to independence. In Asia, the newly independent democracies of Pakistan and India which we looked to as hopeful democracy success stories for the future were at each other's throats. A very nasty little war was brewing in Vietnam at the time, and in Latin America, a dictator was thrown out of power in Havana, Cuba, when a former university student, Fidel Castro, came down out of the mountains of Cienfuegos to establish a socialist government 90 miles off the shores of the U.S.

Q: Were you aware of these things?

CHURCH: Very much aware. The very activist Chicago university student environment was caught up in either promoting or protesting many of the domestic and international political events of the decade. Of course, I became involved as well. In fact, I can say that, in all honesty, one of the most influential people in my life and one who indirectly launched me on a career in international development was Fidel Castro.

During my first Christmas winter holiday break at the University of Chicago in 1959, I didn't have enough time or money to go home to Oregon for Christmas, but I wanted to go somewhere for relief from the Chicago winter. Fidel Castro had just come to power in Cuba and, as part of his propaganda drive to gain support for his new political regime, had extended an invitation to university students all over the U.S. to come and visit Havana and see his revolution. So five of us got into a little Volkswagen beetle and drove for a day and a half to Miami where for $90 we boarded a "Cubana" Airlines plane and spent a week in Havana, Cuba, courtesy of Fidel's revolutionary government. We stayed in an expropriated luxury hotel overlooking Havana's harbor, and each day we were bussed around the island to look at projects the government was showcasing.

Well, I came back from that trip very troubled by the human costs of the reforms he was fostering. But that first hand experience of revolutionary Cuba did impress me with the suppressed dynamism of a developing country struggling to emerge from poverty and corruption. As a result, I changed my academic program from psychology to economics and determined to seek other ways to get overseas again to learn more about the potential for economic and social growth in the developing world.

Two years later in 1962 through an international summer job exchange program for business and economics students I returned to Latin America, this time to Lima, Peru. In Peru, I got another perspective on the developing world with an exposure to the social and economic problems of a society of a few extremely wealthy and many extremely poor. I went back to Latin America a few years later, again on another student exchange this time for a year on a Fulbright grant where I did thesis research for my Masters at Stanford University, and again later as a graduate student at the University of Oregon to conduct research in Guatemala for my Ph.D. in economics. It was in Guatemala that I came to learn about USAID [United States Agency for International Development] and decided to apply for a job.

Q: Were there any professors that particularly stood out in your mind?

CHURCH: There were. One of my instructors, Manning Nash, a Professor of Anthropology at the University of Chicago had written a very interesting book called The Machine Age Maya about the introduction of technology to the Indians in the highland mountain regions of Guatemala. He conducted a socioeconomic study of the introduction of a textile mill into a very traditional Indian community. As a student of his as well as of Theodore Schultz, whose own research into the economic behavior of Guatemalan Indians resulted in a book titled Penny Capitalism, I became excited about the potential for economic development even if the economic growth models of the day had yet to show much of an impact on poverty.

While these two Anthropology professors introduced me to a lot of exciting development issues, I remained an economics student even though the discipline focused largely on macroeconomic issues related to monetary and fiscal policy. What I saw was a need in the developing world to integrate macro- or national-level economic policy with grass roots micro or community and individual consumer- and producer-level behavior of local communities outside the economic mainstream. Later, during my Ph.D. program at the University of Oregon, I was fortunate to meet another professor, Raymond Mikesell, an international trade and development economist, who supported my thesis research in Guatemala where I had a chance to study some of the same highland Indian communities where Nash and Schultz had done their earlier work.

Q: You did your doctorate at Oregon? What was your thesis?

CHURCH: After the University of Chicago I went first to Stanford University, in a two-year Masters Degree Program in Hispanic-American Studies. The program included a year in Montevideo, Uruguay on a Fulbright Scholarship to study the Latin American Free Trade Agreement, (LAFTA) an economic integration effort among Mexico and countries of South American along the lines of the European Economic Community which was also coalescing at the time. I took the Fulbright Scholarship year to study just how effective a common market framework might be among developing countries as compared to the developed countries of Europe.

My Fulbright fellowship year in Uruguay was also my first opportunity for an extended emersion in the developing world. After finishing my masters thesis research in 1965, I recognized just how important more advanced study into international economic development issues was. I decided therefore to go on for my Ph.D. in economics before starting a career. So I "went home" to Oregon in 1966 and launched into three more of years study for my doctorate.

I received my Ph.D. in Economics from the University of Oregon in 1970s. My thesis was on the Indian marketing system in the highlands of Guatemala. I took an approach similar to that of Theodore Schultz; his research examined how economically rational the non-western Guatemalan Indian farmers behaved in managing their farm production resources. I sought to answer a related question about how economically rational these indigenous communities were in their market trading behavior. Until that time, a popular belief was that "non-western" societies were poor because they were not economically rational and therefore did not produce and trade in a fashion that would lead to greater efficiency and prosperity.

Q: Any particular points you got from that study?

CHURCH: There is one point that appeared very relevant to USAID's early efforts at development assistance in Guatemala. When you go into an Indian village in the highlands of Guatemala on market day, you'll see a great deal of commercial activity - a lot of small buyers and sellers of similar products like corn, beans, chickens, hogs, rice, and textiles. They obey all the economic laws of efficient markets: large numbers of buyers and sellers, homogeneous products, easy market entry and plenty of price and product information. They will haggle over price with their relatives and neighbors as vigorously as with a stranger. It's a very competitive process. All the conditions of market competition prevail. Larger merchants took advantage of this fragmented and internally competitive nature of these Indian communities to buy low and capture the bulk of farm produce that they then could resale at much higher prices at very profitable margins.

Now, the USAID's strategy aimed to organize Guatemalan Indian farmers into cooperatives to buy and sell collectively so they could get better prices for their inputs and produce. But this "cooperative strategy" was often at odds with the very competitive nature of the Guatemalan Indian culture. The concept of a cooperative movement didn't fit too well with the very competitive nature of local communities. Getting Indian farmer-traders together so they could bargain collectively with more powerful merchants from outside the community proved very difficult. It took a while for USAID to realize that in such settings a cooperative movement required strong economic incentives to overcome the local competitive forces.

Q: So what happened after you finished your graduate work? How did you connect with USAID?

CHURCH: As often happens with graduate students, I ran out of money and time during my research in Guatemala. There was a wonderful Mission Director at the time in Guatemala by the name of Dean Hinton. Shortly after his arrival in Guatemala, Hinton invited a team of economists from Iowa State University to help design a development program for the country. They needed information on conditions in the regions of the country where I had been doing my research. I was able to sign on with the team for six more months to help write a Guatemalan economic assistance strategy focused on the highland of the country. I got to know the mission and the staff at that time, of course, and learned a bit about the USAID program. Dean Hinton encouraged me to consider joining USAID. When I returned to the United States to defend my thesis I submitted an application to the Agency. Several months later very close to graduation, a letter came from USAID inviting me to go back to Guatemala as a USAID foreign service officer. I was thrilled, and, of course, said "Yes." So, in September of 1970s I finished at Oregon, and my wife and I came to Washington where, in October, I was sworn in as a foreign service officer, given two weeks of orientation and in November packed off to Guatemala as a USAID program economist.

Assignment to the USAID Program in Guatemala (1970-73)

Q: Well let's talk about Guatemala. What was the situation when you arrived there?

CHURCH: I arrived at a very difficult time in Guatemala. A few months earlier, the American Ambassador to Guatemala had been gunned down in the streets of the capital city. There was constant urban guerrilla activity going on. Che Guevara was loose in the mountains of Bolivia. The United States was very concerned about Castro and his impact in the region, and so there had been a concerted effort on the part of the Kennedy and Johnson administrations in the 1960s to provide greater economic assistance to the region.

Of concern to many of us was the entrenched poverty among the highland Indian communities and the fear they might get caught up in a rural revolution. About half of the country's 6.0 million population were of Mayan Indian descent living in the western highlands of the country. The old somewhat "feudal" colonial plantation system was giving way but nothing viable seemed to be emerging in its place. The Indian community in Guatemala traditionally depended on the established landowning class for employment on their large plantations and farms. And the land owners depended on the Indian population for low-cost labor to keep down the prices of their sugar, coffee, cotton and banana exports. In the first half of the century, Guatemala had instated indigent laws that allowed the government to conscript anyone not working into harvesting coffee, sugar cane, cotton, and bananas.

When the indigent laws were abolished, land owners feared the economy would collapse. But lower infant mortality and longer life expectancy led to a growing highland Indian population that needed plantation work to supplement its meager corn cultivation or milpa incomes. Moreover, increasing population was putting pressure on the land and the soil was being depleted by over-cropping and grazing. Because corn cultivation only lasted three or four months out of the year, Indian families migrated to the coast to harvest plantation crops, no longer forced by indigent laws but by population pressures on the land. In short, plantation owners needed to worry no longer over the possibility of labor shortages.

This seasonal migratory labor arrangement also created social problems that disrupted progress in Indian communities. Schooling was difficult to provide to children who migrated with their families from one location to another. Health conditions in the labor camps were very poor. So, it was very difficult to deliver public services to improve living standards of the people who needed them most. Any development assistance program had to come to terms with this.

The USAID mission aimed to increase smallholder farm productivity and incomes as a way of breaking the country's cycle of seasonal underemployment, low-wage migratory labor and poor health and education services that kept the highland Indian population mired in poverty. Based on recommendations from thlowa State University study on which I participated, USAID sought to reach Guatemala's small Indian farmers with improved "green revolution" maize and wheat varieties that were coming out of the international institutes like the Corn and Wheat Institute (CIMMYT) in Mexico at that time. Shorter maturing, more rapidly growing varieties would allow areas to get two harvests where they had gotten one previously. This released land for cultivation of irrigated nontraditional high-value vegetable crops that could be exported. It would allow the farm population to remain in place in the highlands throughout the year. In this manner they could then be reached with the health and education services they lacked.

There was some urgency to raising small farm productivity, incomes and jobs as well. The sugar and banana industries were declining under the pressure of falling international market prices and the land was going into cattle grazing which had much less demand for labor. This strategy of boosting yields of traditional food crops and introducing production and marketing opportunity for diversified nontraditional export crops became the focus of the program on which I was working as an economist in Guatemala and the other Central American countries between 1970s and 1977.

In 1973, when the USAID program in Guatemala was well underway and showing some promising results, there was an opportunity to take the strategy "on the road" to the rest of Central America, where similar needs existed in Honduras, El Salvador, Costa Rica and Nicaragua. The U.S. was beginning to appreciate the fact that Central American producers could provide fresh fruits and vegetables to the U.S. in the off-season and wouldn't compete directly with U.S. suppliers. We had a challenge in the early years of the Guatemala program convincing U.S. interests, including Congress, that this wouldn't be disruptive to U.S. food producers. Eventually, USAID was able to help Central American countries build a winter season market niche for their high value agricultural produce in the U.S. By the time I left the region, refrigerated trucks were moving by ocean barge from Guatemala to Florida where they were attached to tractor units and moved up the east coast to urban grocery stores. USAID was building links from Guatemala's highland Indian communities to east coast suburban consumers in the U.S.!

Q: Did you have any other successes in the Guatemalan program?

CHURCH: It all depends on how we choose to define "success." To give you an example, USAID support to the cooperative movement among Guatemala's highland communities included setting up a number of warehouses or silos to store corn at harvest time. The goal was to give more marketing power to Indian farmers by providing the alternative of selling grain to their own cooperative rather than to speculators. In the past, truckers would come up to the highlands to buy up much of the corn crop at harvest - when prices were low and production debts needed to be paid. They would hold the corn in their facilities, and then when there was a shortage of corn in the highlands toward the beginning of the new planting season, return and sell it back to the Indians at much higher prices.

The USAID solution was to assist local farmer cooperatives to build small cooperative warehouses using Butler bins - metal silos like you see all over Iowa - and to provide some capital to the cooperatives to buy the corn at harvest. In this way, they could hold it in the silos for resale back to members of the cooperative and the community at a lower price than the truckers would sell it when supplies became scarce. Well, I can remember going into one community a couple of years after farmer cooperatives had installed the USAID funded corn silos and found them sitting idle. My job was to assess why the program wasn't working, why the grain bins were not being used.

When I started interviewing truckers and local farmer cooperative members, I learned that one very interesting development had taken place. After the silos were built, the first year the truckers came to buy, they couldn't get any corn at the low prices they had offered previously because the cooperatives were now paying more to buy and hold the corn for their farmer members just like the program was designed. But when the truckers started increasing their offering prices to compete, farmers showed no loyalty to their cooperatives. As I mentioned before this was a competitive culture. So farmers again sold to the truckers but, this time, at a higher price. The cooperative wasn't able to buy at what it could offer so the corn silos sat empty. Still the local community had more money because of the better price they were able to command for their maize from the truckers.

Now the question is, was that a success or not? We accomplished our objective which was raising the price of corn for producers by having the corn bins there, but the cooperatives never really functioned as commercial units because farmers sold where they could get the best price, even when that meant dealing with the truckers who earlier had exploited them. A U.S. Congressman visiting one of these villages and seeing an empty USAID funded grain silo might conclude the USAID cooperative program was a failure. While the farmer cooperatives were not successful in using the bins to buy, store and trade their members' corn, they were able to force the truckers to offer a better price. The coops provided the service of a market floor price. So USAID did accomplish the objective of the program which was to improve the marketing position of local farmers by giving them an alternative selling option.

Q: That is a good illustration. Is that still a lesson that USAID can use elsewhere?

CHURCH: Yes. I would say that kind of experience could be replicated in many African country contexts. I think we've seen it in the Asian setting. In fact, I had an opportunity when I left Guatemala for Bangladesh, which was my next post halfway around the world, to take some of those concepts to totally different areas of the world and apply them with similar effectiveness. As I said, I firmly believe from my experience as a USAID economist that people behave in an economically rational way no matter what their stage of development is. They respond rationally to economic incentives anywhere in the world if given the opportunities and the options from which to choose and the capacity to act.

One of the greatest development contributions USAID has made is providing people with more opportunities to exercise economically rational behavior by helping them acquire the resources - skills, land, technologies, markets - to exercise choice. USAID cannot force everyone to become a loyal cooperative member. What USAID can create is an environment for choice. For example, in the case of Guatemala, Indian farmers now have two choices, a trucker or a cooperative to trade their grain where before they only had one, a trucker. That alone was enough to improve their lot.

Q: Did everything go smoothly during your first overseas assignment with USAID in Guatemala?

CHURCH: Hardly. In development work there are always surprises and unexpected challenges. There were two serious setbacks that we experienced during my tenure with the program. One was a devastating earthquake in 1976 which laid waste to large sections of the Guatemalan highlands. For the next year, we were essentially mobilized to restore a lot of the services that were disrupted. The earthquake not only leveled villages but brought down landslides on roads so communications were cut off. We cut down trees along straight stretches of road so the highway could be made into a temporary landing strip for single-engine planes that flew in medical supplies and flew out the seriously injured. That was in February of 1976, and it was a serious blow for Guatemala. It set back the country's economic progress a decade.

Q: What was your role in that disaster?

CHURCH: The USAID mission staff had two roles. First, we found ourselves working with the strategic military assistance command out of Panama which was bringing in U.S. Military C-41 cargo jets with emergency tents and food for the most heavily affected communities. Our immediate job was just getting an assessment of the damage done and determining where the assistance was most needed. I can recall getting in the light planes filled with drums of aviation gas in the back and flying into these remote highway landing strips which served as staging areas. A crash would have been fatal. It was a dangerous thing to do, but it was the only way to get into some of these remote areas to get a good look at what was going on and to deliver short term assistance by getting injured people out and getting doctors and medical supplies in. In the longer run, of course, we had to rethink our assistance program to assess what we could keep running while the relief effort was underway. We really wanted to sustain the long run program without ignoring urgent short run needs. It was not an easy balancing act.

Q: Well, you said there was another event.

CHURCH: The other challenge we faced in Guatemala was a change in U.S. policy toward the country, because of the military's influence in Guatemala's government. Without a larger degree of democratic participation in the political process, the United States was no longer prepared to continue economic assistance at the same scale as when I arrived. One of the most difficult challenges for us as development practitioners is how to help people in need in a political setting that is not very conducive to that assistance. Development funds are often fungible. Giving money, say, for building Guatemala's education system, may not actually add anything in the way of more resources to the country if the recipient government simply cuts back its own education funding and instead buys more military weapons with the savings. If, on the other hand, we refuse to give assistance until more democratic systems and political will is in place, a lot of people at least in the short run, will suffer and the pace of progress will be retarded.

Q: Did it have any effect?

CHURCH: In the long run, yes, but conditions did get worse before improving, with civil war and political strife in the 1980s and up until just a few years ago. It was not until 1995 that Guatemala had a peaceful transition from one democratically elected government to the next. A peace accord had just been signed with rural combatants and development assistance is starting to flow again.

Q: What would you sum up as the impact of that strategy you helped develop during that period?

CHURCH: If you go to Guatemala and visit the highland Indian communities today, you'll find a greater awareness of their capacity to improve their lives than when USAID first started its development assistance programs in the country. Before, people had a more fatalistic approach toward the world and to their livelihood. Now there are widespread aspirations for a better life, and there is a growing confidence in the ability of local communities to make it happen.

Still, the country faces serious problems. Endemic disease, illiteracy, shortage of potable water, and access to sanitation remain serious challenges to development, particularly among the rural Indian population. Child and maternal mortality figures are high. Education services also are still lacking. Guatemala has one of the lowest literacy rates in the world, just ahead of Haiti at the bottom of the list for Latin America. There is a long way to go, but the difference today is that among rural communities there is more awareness of what can be done and among political leaders a bit more commitment to providing support. I don't think the Mayan Indian culture would allow the clock to be turned back. There is more popular pressure on the government to provide these services. I don't think Guatemalan leaders can ignore that today and expect to remain in power.

Assignment to the USAID's Regional Office for Central American Programs (1973-1978)

Q: Let's talk about your experience in USAID's Central American Programs Office (ROCAP). This was at a time when many thought regional economic integration was the way to go in the Central American area. What was your view of that potential? What were you trying to do?

CHURCH: After the USAID program got under way among Guatemala's highland Indians, I had the opportunity to bring my experiences to other countries in the Central American region. USAID through its regional office was supporting the Central American Common Market as a vehicle for development through trade and economic integration. In the regional progral had an opportunity to work and collaborate with two other very influential USAID colleagues in my life - Oliver Sause and Ed Marasciulo who both were Mission Directors in ROCAP. In 1973 I moved from the Guatemala program to the regional office where I spent four more years traveling and working in Central America, helping put together agriculture sector strategies for El Salvador, Nicaragua, Honduras and Costa Rica. Our goal was to bring in the new technology which was emerging out of the international agricultural research centers, connecting it with some of the marketing opportunities that existed in the Caribbean, and drawing on U.S. university and private sector expertise to assist.

We were all hopeful that the Central American Common Market would succeed and worked hard to bring the concept to fruition. Early common market efforts had focused on the industrial sector and strove to achieve in the region the economic efficiencies that were possible from specialization and trade. On paper it clearly made more sense for there to be, say, one tire manufacturer, one pharmaceutical plant, one caustic soda factory, etc in a region of only 15 million people than for each country to try to foster these industries within its borders. And, indeed, in the early years, agreements were reached to distribute these "integration industries" among countries in the region and to remove trade barriers to the movement of their products so that they could produce volumes of output sufficient to keep costs low and prices competitive with those of imported goods.

After initial early successes with selected industries, USAID believed it was timely to attempt to make some progress as well in the agricultural sector. Again, the view was that Central American countries by specializing in producing surplus exports of basic food crops - say, Guatemala in corn and wheat exports, El Salvador and Nicaragua in rice exports and Honduras and Costa Rica in bean exports - could trade with each other at lower food prices than if each country tried to be self sufficient in all these crops. Moreover, land freed up from such specialization could be shifted to production of high value export crops, which, again, the Central America countries could specialize in to assure volumes sufficiently great and reliable to penetrate U.S. markets.

Q: That's the theory, of course. But what actually happened during your time with the program?

CHURCH: As you might expect, not what we hoped for! First, it was difficult to convince the Central American countries to depend on each other for their food needs. A bad crop year in, say, Guatemala, would mean skyrocketing corn and wheat prices in the other countries in the region. If El Salvador exported too much rice to meet the demands of its neighbors it might experience shortages and rising prices at home. The risks of these outcomes - and the likelihood of these outcomes given the often fickle meteorological conditions of the region - dictated against agreeing to any kind of food grain production and trade arrangements within the Common Market. Even our offer to set up a regional buffer stock program for these grains, to sell in times of scarcity and buy in times of surplus, was not sufficient to precipitate cooperation in regional food grain production and trade.

As it was, all of the Central American countries were in the early stages of development during which they are importers of capital and production inputs and, as a result, net deficit countries. It is difficult to achieve trade cooperation among countries at that stage of development when all are looking for ways to finance their trade deficits by increasing exports. All the Central American countries were happy to boost exports, but none wanted to import from its neighbors. The aggressive exporting countries were Costa Rica and El Salvador. They also attracted a disproportionate share of investment in the Common Market's "integration industries." This left Guatemala, Honduras and Nicaragua on the defensive and consequently resistant to opening trade in the region. With that kind of environment, it was very hard to get a Central American trading agreement going and to make it viable.

It is interesting that nearly two decades later there is talk again today about regional markets in the western hemisphere, this time expanding NAFTA [North American Free Trade Agreement] to include, in addition to Canada, U.S. and Mexico, the entire hemisphere from Chile to Canada in one "Free Trade Area of the Americas!" I think we have an environment today that may be a bit more appropriate for freer Western Hemispheric trade. While we did not get very far with regional economic integration in the 1970s, we at least helped Central American countries build capacity to be more active trading partners today. My contribution was to help boost the productive capacity of the agricultural sector which USAID still views as an essential building block for that type of a regional trading agreement.

Q: How did that work? How did you figure you were able to introduce these ideas?

CHURCH: The reservoir of "green revolution" technical knowledge had some application in each of the Central American countries. Each had tremendous scope to boost the productivity of traditional food crops and to diversify into higher value export crops using available technologies. In the 1970s Central America was still very much an agricultural region. To modernize the sector meant to reach the largest proportion of their populations with more productive jobs and better more stable incomes. I think USAID provided not only the resources but also awakened governments to the need to support its traditional small farm agriculture sector with training, technology and inputs to achieve and sustain national economic growth.

One of the questions we've asked ourselves is what happens after USAID pulls out? Is the country's economic growth and prosperity sustainable? In fact, the two big questions are sustainability and replicability. Did the countries have the capacity to continue efforts, say, in food production, education or health beyond support from outside donors; did governments have the capacity to expand these programs beyond just the immediate target communities that our initial assistance programs reach at their start-up by building local institutions that could spread that type of activity throughout the country?

Q: You were really trying to replicate your experience in Guatemala. How did you find the reception in the other Central American countries?

CHURCH: Our reception in each Central American country was unique. We had again some very wide ranging political situations with which to deal, from a military dictatorship in Nicaragua to a popular democracy in neighboring Costa Rica. USAID had to adjust its program to accommodate the political realities that existed. For a young foreign service economic officer like myself at the time, it was a real learning experience. There was nobody there with the answers, so we were learning by doing.

We made mistakes. For example, USAID set up subsidized credit programs to attract farmers that banks considered to be either poor credit risks or too costly to reach with loans. But farmers often felt no obligation to repay their debts because in too many cases, banks issued subsidized loans as political gifts under pressure from parties in power. Moreover, credit agents lacked the will or the way to enforce collections, particularly among larger more powerful farmers who managed to capture many of the loans intended originally for smaller more resource limited producers.

Good intentions aren't necessarily sustainable. We learned that lesson but only after investing several years and several millions of dollars in subsidized and "supervised" farm credit programs. We now know that credit must be bankable, that giving credit for fertilizer and seed without looking at the marketing outlets and income earning potential will lead to failure. Credit may boost production at the outset, but if farmers have no place to sell what they produce at a price that will cover costs, they won't have the income to repay loans or to continue on their own.

An excellent example where we did get it right was the involvement of USAID and other donors in promoting Costa Rican cut flower exports in the off-season to the United States. Here is an example where we looked at market opportunities first and then we looked at production needs. We provided market incentives more than we provided capital, and we provided opportunities for local investment, equity participation. I think this was one of the greatest and most interesting programs that USAID supported.

At the regional level, USAID sponsored a small program that financed an intermediate financial institution called the Latin American Agribusiness Development Corporation (LAAD) which took equity positions in local Central American agribusiness companies. But USAID leadership was not comfortable handing taxpayer money to for-profit organizations at that time. USAID failed, I think, to recognize that profits provide incentives for others to come into that industry and compete and eventually lead to sustainable system with broad development benefits. In the 1970s and 1980s USAID was not as commercial or pragmatic an Agency as it is today. Early USAID efforts were more in the social area: the health, population management, family planning, and education sectors. USAID was a long time in learning that sustainable and replicable development requires both an entrepreneurial driven incentive system as well as social programs.

Q:. Anything more on your Guatemala anCentral American experience before we move on?

CHURCH: Guatemala and its Central American partners were my first exposure to work in the developing world. They were where I did my USAID "apprenticeship." I was fortunate to be assigned to a very interesting region and a very challenging and diversified set of countries in which to begin a USAID career. It certainly is a region where, at the time, there was a development need and where the U.S. government had a direct interest in building capacity in the region to achieve stable and sustainable economic growth and social progress.

Moreover, I had the good fortune to work with a number of excellent USAID colleagues during my assignments in Guatemala and Central America. We were unique, I think, at that time in USAID's history. We stood out as the first USAID generation of trained development professionals. We were among the first to come out of the U.S. university system with formal course work and graduate degrees in international development. Our predecessors, and in some cases our mentors in the field, who participated in earlier U.S. government overseas assistance going back as far as the Marshall Plan in Europe and the Point Four plan in Latin America, were all career specialists in engineering, agricultural marketing, research and extension, infectious diseases, or education administration. None were development practitioners by trade and training. We were the first trained development specialists, so to speak, in the Agency. International development was still an emerging career field.

Q: How do you characterize that development orientation as different from the others? Were there features that set you apart?

CHURCH: My first overseas assignment as an economics officer with USAID made me aware that development requires a problem-solving approach, looking at the situation, sizing it up, and then cooperating with beneficiaries to find a workable solution. Coming at development with preconceived solutions seldom works. For example, some of the old guard agriculturalists would look at Guatemala or Central America and say the answer was "cucumbers" or "farm credit" or "corn silos." That was because they knew marketing cucumber, managing credit or building corn silos from their work in U.S. agriculture.

But a successful development strategy requires a lot of improvisation, motivation and problem solving. You build answers as you encounter problems. You are identifying incentives to make people go after and solve their own problems. USAID's early efforts in Central America were very much aimed at importing solutions rather than working with local communities on solving problems. I'd like to believe that we were one of the first generations of development practitioners who tried to bring that broader problem solving and social engagement approach to the region's needs. My assignment to Guatemala and Central America afforded me the opportunity to work with and appreciate the knowledge of many brilliant and dedicated U.S. professionals, but in the end I had to learn how to adapt that knowledge to the unique set of development challenges the region presented.

Assignment to the USAID Program in Bangladesh (1977-81)

Q: Then you left the Central American region, when?

CHURCH: We transferred directly from Guatemala to Bangladesh around Christmas time 1977. Earlier, I had cast my eyes at a world map trying to decide where I wanted to take my USAID career next. I had no desire yet to go back to what I joked was USAID's only true "hardship post", Washington, DC. I know I could have benefitted from a tour in the U.S., getting to know how the Agency functioned, because I went straight overseas to Guatemala when I joined the Agency. Still, I joined the foreign service to work abroad, not in the U.S.

However, the value of a Washington, DC tour with USAID became apparent in Bangladesh where the Agency had a very high profile program. Bangladesh was a country that Henry Kissinger had called an internationa"basket case." Bangladesh became independent from Pakistan after a bloody war in 1970s only to be devastated by monsoon floods. Its first decade as a country was one more of disaster relief than economic development. Many doubted that Bangladesh was viable as a country.

The whole South Asian continent was undergoing an exploding population. Despite a "green revolution" that promised significant increases in food grain production, mass starvation was still a real threat. The region at that time was still very unstable both economically and politically and USAID was most anxious for some economic development "success stories."

Q: What was your position in Bangladesh?

CHURCH: I served first as program economist and then an agricultural economist in Bangladesh.

Q: What was the situation when you arrived?

CHURCH: I worked in Bangladesh at perhaps one of the more promising periods in the history of our assistance programs in the country. By 1977 when I arrived in Bangladesh, the country was beginning to recover from a period of floods and droughts that had punctuated its short life as an independent nation since its bloody independence struggle with Pakistan at the beginning of the decade. Large amounts of money - twentyfold what we had for programs in Central America - were budgeted for Bangladesh development programs. In Central America at the time, the population was 15 million. Bangladesh had nearly 90 million people in a much more concentrated geographic setting. Poverty was much more widespread in Bangladesh. For me, the Bangladesh program also required a lot more understanding of how the USAID bureaucracy and donor community conducted and coordinated a large country development assistance effort.

Q: What were the kinds of programs with which you were concerned in Bangladesh?

CHURCH: One of the things in which I became involved was building a better knowledge base of what affect our development dollars were having on peoples lives. At the time USAID was working largely at what we called the "outputs" level, focusing on things like how much fertilizer, credit school books or condoms our programs distributed rather than how much more food was produced, how many more kids were educated and how much more income or well being program beneficiaries experienced. USAID's program in Bangladesh was a start, at least for me, of efforts to monitor more closely these "outcomes" of our programs, that is, of what our programs were accomplishing boosting food output, literacy and rural incomes or lowering infant mortality, disease incidence and population growth.

Bangladesh was more about accomplishment because we were working in an environment where life was a make-or-break situation for many people. A failed crop meant hunger, even loss of life, in a setting like Bangladesh. A simple disease or infection was life threatening to children already weak and malnourished. Bangladesh appeared to be on a collision course between population growth and food availability.

USAID needed better information about what was working in our food production assistance programs. Bangladesh offered an opportunity to do something constructive in getting better numbers to people in USAID/Washington and in the Congress who made decisions. So I spent a good share of my time in the field talking to farmers, learning about their problems, learning why they were using a particular seed or fertilizer or cultivation practice. A central question of concern was: "Why, when new high yielding rice and wheat varieties were introduced, was there such a wide gap between the crop yields that scientists obtained at the experiment station and what farmers experienced in their fields?"

Q: Why these gaps?

CHURCH: First, agricultural researchers could control for a number of factors on their experiment stations that farmers could not in their fields - water availability, pests and plant diseases, for example. Small farmers, however, do not have nice well-defined farms. They cultivate a small plot of land in one place, rent out a piece of land in another area, rent in another piece of land from a neighboring farmer as well. A farm may consist of say 3 hectares of land total but be made up of a dozen or as many as 20 or 30 small rice paddies or plots scattered over an area many times that size. Each plat has its unique soil conditions and planting schedule. One field may be dry; one may be wet. Our surveys showed that farmers select plots so as to use their labor (and that of their family members) most efficiently over the entire cultivation year, not always to maximize yields.

We quickly realized that research scientists cannot go into a region with a single crop variety or cultivation practice and expect it to be adopted throughout a farmer's land holding. It may be adopted only in part and only on some farm plots because land varies so much by soil type, water regime and fertility across any single farm operation. Farmers purposely select plots with a variety of features in order to spread risks and stagger planting and cultivation times in such a way as to best use their time and labor. So, new crop varieties did not yield on farmer's fields what they did in experiment station trials.

Q: Did you come to any general conclusions about farming in Bangladesh?

CHURCH: I think we came up with conclusions about ourselves and how we should conduct agriculture research in a setting like Bangladesh. The major conclusion, if there is one to be made, is that the client needs to be much more a part of the development equation. I can see that going on much more today in our attempts overseas to partner with our clients.

In Bangladesh in the late 1970s, we were just beginning to look at the farm community and the farmer as a partner in the process, as someone from whom to learn. By comparison, earlier in Central America we essentially carried pre-packed solutions to farmers via mobile school programs, on trucks equipped with special plows and seeders to show farmers how to use this stuff. In Bangladesh, we listened to how framers did it and then examined ways that we could help them maybe do it better or let them look at options. We conducted a lot of on-farm trials in the context of what came to be called "farming systems research", which essentially studied the whole farm unit. For example, how is rice cultivation linked to the livestock enterprises on the farm and how does each compete for limited family labor? We examined the interactions among the several crop and livestock enterprises that made up the whole farm unit that the farmer managed rather than focus exclusively on a single crop.

Q: What was our program in agriculture then? What were we trying to do specifically apart from this approach?

CHURCH: In Bangladesh we were trying to close the domestic food production and consumption gap. The United States was supplying as much as 2-3 million tons of food grains annually to the country and more was coming from other donors, notably Canada and Australia. To put that into perspective, Bangladesh produced at the time I was there about 15 million tons of food grains and the donors provided another 4-5 tons, about 25% of the country's total consumption needs. A country is considered to be in a food vulnerability situation when it depends on imports for more that 5% of its food needs. Bangladesh was nearly five times that level, so the objective was to increase domestic production of basic food to bring that gap down to under 5% or from 5 million tons to about one million tons of grain imports. At the time the U.S. had food grain surpluses to share, but no one knew what the long run forecast would be for U.S. agriculture. To close that gap in Bangladesh we needed to build capacity to produce more food by the country's own farmers.

Q: The primary strategy for doing that was what?

CHURCH: Improved seed and more and better fertilizer use, or so we thought at the time. I think we came away from that experience realizing that improved farming practices were equally critical. Seed and fertilizer were basic components, but not the whole solution.

An immediate problem was to get fertilizer to farmers, which the government was subsidizing to encourage adoption. Well, it was catching on. Chemical fertilizer was used on about 5% of the crop land in the early 1970s. When I got there in 1977 farmers were applying it to about 30% of the crop land. And when I left in 1981 the figure was at about 60%. Well, the government could afford to subsidize fertilizer when it was used on only 5% of the crop land, but as usage grew, subsidies began eating up the entire agriculture budget leaving little money for research and extension services. Without such services crop yields from added fertilizer use began to level off. Our chemical fertilizer use strategy was not sustainable for the long run.

Q: Were you able to accomplish anything in that respect?

CHURCH: There were two things that USAID can point to as fairly successful. One was the privatization of the fertilizer sector. We got the government out of the fertilizer business. It was entirely a government operation which is a traditional pattern in that part of the world. The fertilizer corporation, the fertilizer marketing, the distribution of fertilizer was all in government hands. We helped the government dismantle that system and introduce private distribution networks. There was a great deal of resistance at first because everyone was sure the middleman would capture the profit, but we demonstrated that enough middlemen would compete and bring down the margins to where they could provide a better service at a cheaper cost than the government.

Secondly, as I already described, we brought farmers into the partnership or into the process as active informants of what was needed and what worked and why, whereas before we were only listening to the research station scientists.

Q: Who was working with the communities to introduce these technologies and concepts?

CHURCH: As far as I could tell, one of the major ways that information was shared was by word of mouth and marketplace, not the extension service. For example, private fertilizer distributors became disseminators of information. I recall now that you mention it, the bags had on them instructions as to how to apply the fertilizer to get the best yield. So we used the market mechanism as a vehicle for getting farm messages as well as chemical fertilizer into farmers' hands.

Q: Did you find the Ministry of Agriculture receptive to doing things this way or did you essentially bypass them in this approach?

CHURCH: The Ministry of Agriculture had strengths and weaknesses. I have never seen more dedicated civil servants than those with whom I worked in the Ministry of Agriculture in Bangladesh. But the Ministry had few resources with which to support its research and extension staff. As I indicated, most of the budget was still going to pay fertilizer subsidies. So agricultural researchers had few vehicles to get around the countryside and had to take bicycles and buses to get to farmers' plots. Their daily meal and lodging allowances were so low and so miserable whenever they left the office or research station they could not afford to travel without using their own money. And, of course, salaries themselves were very modest. That's one of the things we also could point to. To turn around this situation was to say, "OK, we'll reduce the fertilizer subsidy burden, but we want to see the budget savings go into salaries, vehicles and travel allowances for your research people so they can begin to work more with farmers."

Q: Had the agriculture situation changed in that period you were there?

CHURCH: We definitely saw improvements; I think the statistics tell the story. Fertilizer use continued to grow and crop yields improved even as subsidies were lowered and the cost of fertilizer to farmers rose. Bangladesh has its own natural gas resources which it began to use to produce urea fertilizer in the country. It is less import-dependent today, despite a larger population to feed! The research system has continued to maintain contact with its clients. I really can't speak to whether the agricultural researchers field logistics problems have been solved. I suspect the situation is better today but that Bangladesh still has a ways to go.

Q: Was the food deficit declining?

CHURCH: Not only has the food deficit declined, but in some years Bangladesh has come pretty close to food self sufficiency. Now to claim food self sufficiency is a little misleading in a country like Bangladesh where purchasing power is such a big factor. You can have sufficient rice, on a caloric basis, but if many do not have the income to buy it, they still go hungry. Still Bangladesh has come very close to self sufficiency in terms of meeting its needs in the nutritional basis using, say, the UN caloric minimum acceptable standards of about 2,200 calories a day. Much needs to be done to raise incomes, especially among the poorest so they have the resources to buy the food and other necessities they need to improve their well-being.

Q: How did you find working with the Bangladeshi people?

CHURCH: I enjoyed it very much. It was a dramatic difference to be in a Muslim culture from a Christian culture in Latin America. The Muslim culture is very hospitable and accommodating. Muslim culture practices tolerance for non-Muslims, even though many people look at the Islamic faith as being very traditional. I found it a very pleasant environment.

Q: How did you find working with the government bureaucracy?

CHURCH: I observed very dedicated people enmeshed in a very rigid system. It is a by-the-book type of bureaucracy, very little creativity, very little originality, but a lot of dedication. As I said, it took the USAID program more than a decade to disengage the government from one policy and practice, fertilizer subsidies, for example. We did that not by convincing the government that a private sector distribution system was more efficient, but by demonstrating the damaging impact that their subsidy program was having on the budget. Still, acknowledging that reality was slow and responding to the reality also took time.

Working iBangladesh as a development economist, I grew to understand better the interdependency of professional disciplines and program management skills needed to get the job done. The Mission Director in Bangladesh at the time we were running this fertilizer program chose not to push the economic logic of lower subsidies which he believed wouldn't resonate among our Bangladeshi counterparts. Rather he made and won the case on financial and budgetary grounds. Development assistance is more than just coming up with a better economic rationale. It also has to connect at a level that produces the political response and commitment that is needed to change attitudes and to make things happen differently.

Q: Did you have any connection with the Embassy and U.S. political interests in Bangladesh?

CHURCH: Bangladesh at the time was part of what was called the Group of 77 nonaligneUnited Nations countries. The U.S. Embassy's agenda was securing Bangladesh votes on United Nations issues of importance to U.S. interests. The Embassy viewed our economic assistance and humanitarian relief work in that context.

Q: Did you see any of the cold war tensions affecting the development assistance work?

CHURCH: Thanks to the cold war, development assistance work in Bangladesh and most of South Asia benefitted from large infusions of annual funding. After all, the whole of Indochina was caught up in the aftermath of the Viet Nam war and the fear of a widening regional conflict was always there. If there is one problem we had, it was how to use the money wisely. The USAID program in Bangladesh went from an annual $20 million program to a $100 million program in development assistance alone, plus another $75 million in food aid, plus a number of export credits. Combined with funds from other donors, Bangladesh was receiving a half billion dollars at the end of the decade of the 1970s.

Q: Apart from the fertilizer subsidies that money was going to what?

CHURCH: Food relief, health, education and family planning programs, with some road infrastructure and school construction work, funded often under food-for-work that built dikes, aquiculture ponds and irrigation canals. The Asian Development Bank was putting money into road infrastructure, electric power, and communications. The World Bank was providing a lot of large infrastructure loans, hydroelectric dams, irrigation systems.

Q: Did you find that kind of overall assistance program worked well?

CHURCH: As an economist, we viewed food aid with a little bit of skepticism because we were fearful it would undermine food prices and discourage crop production. Again the dependency question became important. But it also provided, in some cases, some useful spinoffs. There were a number of food assistance programs built around fish farms, for example. Fish farming became a new enterprise, and the nontraditional food crop of Bangladesh became Tilapia, a species of rapid reproducing and fast growing fish that originated in the Nile region of Egypt. It became a very popular source of protein and food.

Q: Well, any last comments about the Bangladesh experience?

CHURCH: Guatemala and Latin America served to launch my career. Bangladesh and South Asia helped give it depth. My work in the Asia region provided a different perspective on development than Latin America. I learned that in settings like Bangladesh to spur development you often must change more than economic incentives; you must also change the way people act within the bureaucratic circles.

Sabbatic leave at the International Rice Research Institute (IRRI) - 1981-82

Q: So let's go on to your next assignment. After Bangladesh what was that?

CHURCH: During my Bangladesh tour, I became acquainted with the agriculture research programs that USAID and other donors were supporting through a group of international agricultural research centers located around the world. Among the 14 centers at the time were the Corn and Maize Institute in Mexico (CIMMYT) and the InternationaRice Research Institute (IRRI) in the Philippines, two of the centers at the heart of the "green revolution" of the 1960s. Both Centers had scientific staff working in Bangladesh, and I became familiar with their work through some of the farm survey work that I was conducting on my own for USAID.

So, at the end of my Bangladesh tour, I thought that as a change of pace and before going on to another assignment, I would see if I could arrange to take a year of study leave at IRRI in the Philippines. I was fortunate to be invited by IRRI as a visiting scientist in its Agriculture Economics program. IRRI provided me all of the logistic support of a house, a car, and 15 research staff to manage while one of its own scientists was on his sabbatic leave in the U.S. At the same time I was given the opportunity to pursue some research interests of my own.

Q: What was your research?

CHURCH: I directed farming systems research activities as part of an interdisciplinary program run out of IRRI's economics department. The program engaged social scientists along with agricultural engineers, plant breeders, entomologists, and plant pathologists, all working on the goal of improving crop production performance through applied research in farmers' fields. Some of these same scientists working as a team helped develop the miracle "green revolution" rices. IRRI was now attempting to spread the benefits of that effort into more remote areas of Asia and to reach farmers that didn't have irrigation and were dependent on rainfed cultivation. They were finding efforts to do so were not as successful as with the irrigated varieties that offered opportunities for more control over the rate of input application and the management system.

IRRI had developed a research outreach program which essentially conducted trials and studies in farmers' fields with farmer participants and cooperators. IRRI scientists either managed plots in farmers' fields or worked with volunteer farmers who managed plots themselves using IRRI recommended seed varieties, input levels or cultivation practices. The on-farm-trials program was in its fourth year when I arrived at IRRI, and the first results were beginning to come in. The objective was to explain the difference in yield outcomes between farmer-managed operations and research station experimental plots. Also, we were after answers to the question of what constrained farmers from adopting cultivation methods that were demonstrated as superior in experiment station trials.

I had learned from my Bangladesh experience that farmers managed their time, labor and draft animal power inputs to minimize risks when spread over the range of separate fragmented plots of land they managed. When I arrived aIRRI the Institute was starting to develop programs to train scientists from each of the major rice growing countries in Asia and from parts of Africa and Latin America, in how to conduct on-farm or farming systems research. I was invited to become involved in building those training programs.

It was one thing for the rice research scientists at an international center like IRRI to conduct innovative on-farm experiments. It was an entirely different thing to get research scientists in national programs interested and engaged in doing this. As I mentioned, in Bangladesh one of the drawbacks of doing research in farmers' fields was the lack of logistic support that research scientists had. The funding to do research in farmer's fields, which required frequent visits on a regular basis to monitor crop performance, was often insufficient. This was the case in promote IRRI's on-farm research methodology in Nepal, Burma, Thailand, Indonesia, Philippines, Bangladesh, and India.

Essentially during my sabbatic year at IRRI, I was involved in two programs. First, we attempted to pull together the proven on-farm research methods into some training units and test them on visiting scientists from other Asian countries. Secondly, we continued to gather further information on how better to conduct on-farm research in the region.

During that year I became better acquainted with IRRI's Director General, Nyle Brady who had just been recruited by USAID to come to Washington and head up what was then called the Bureau for Science and Technology. Earlier Dr. Brady had arranged for me to spend a sabbatic year at the Rice Research Institute. He wanted more USAID technical officers to become acquainted with the work of the international agriculture research centers, so that they knew more about their mandates, capabilities and, of course, funding requirements. He wanted "friends" of the centers in USAID when it came budget time. Of course, USAID staff would also have the opportunity to build their own technical skills while gaining a better understanding of the Centers' work.

At the time, USAID was contributing about $50 million a year to support international research center programs. It was about a quarter of the nearly $200 million that all bilateral and multilateral donors contributed each year to the centers. The U.S. was by far the largest donor. Dr. Brady was aware that USAID was periodically reexamining the levels at which the Agency should continue its funding. Many in USAID wanted the centers to become sustainable without donor assistance. Dr. Brady was a good bureaucrat as well as a good scientist and knew he would need defenders against those that wanted to cut back USAID funding for the centers before they were sustainable.

Q: What was the assumption that would make people think that IRRI and the other international agriculture research centers could become sustainable without U.S. support?

CHURCH: Well, clearly most Asian countries were benefitting greatly with higher food grain productivity using research results the centers were generating. Some in USAID thought that these countries should shoulder a share of international research center budgets and thaIndia, Indonesia, Thailand and The Philippines, especially, could afford to pay a portion of IRRI's annual expenses now that they were experiencing much greater food grain production, thanks to IRRI's research findings. Over time, therefore, the original donor countries should be able to scale back their support.

Q: Was that beginning to happen?

CHURCH: Hardly. The developing countries in Asia benefitting from new agriculture research were hard pressed to find enough funds to operate their own national agriculture research and extension programs. And these national programs were critical to getting international center research findings into farmers' fields where they would have their payoff in higher rural incomes and greater food production. Moreover, developing countries had a hard time attracting and holding their own agricultural scientists and technicians and did not want to see the international centers attract them away with the higher salaries and benefits they could enjoy at places like IRRI. Some of the best scientists at IRRI were Asian, and if they weren't at IRRI, they might be back in their own countries contributing to their national programs. So there was a bit of competition for scarce scientific talent between the national programs and international centers. As a result, there were only modest contributions by the Asian developing countries. The developing Asian countries could be expected to cover only a very small share of IRRI expenses.

Q: How did you find IRRI as a professional operation to work at?

CHURCH: IRRI is one of the best of its kind. Its scientists have very high standards. They recognize the major risk they take when they release a rice variety into the hands of tens of thousands of farmers. They're essentially affecting people's lives, livelihood and risks of survival. There is one aspect of research that is often neglected, and it is something that is not the glamorous cutting edge aspect of the scientific world. It is what is called "maintenance research." It involves keeping ahead of the next generation of plant pests and diseases, trying to improve crop tolerance to floods and droughts. It is something that needs to be built into the ongoing research process.

So it's not just the quest for new knowledge that is important but also maintaining the progress already achieved and not sliding backwards. If farmers continued to use the same rice varieties indefinitely into the future, for example, eventually genetic disintegration would set in. There is a constant need to improve varietal selection, to sustain a more viable gene pool for cross breeding purposes, and to be able to handle the challenges of breeding resistance to the next generation of insect pests. So, all of these things are an important part of the research environment. Really one could view the international research centers not as something that benefits just the developing world but, in fact, benefits the developed world as well.

In fact one of the things we attempted to do when I came back to Washington after my year at the International Rice Research Institute was to help Dr. Brady demonstrate to the U.S. public and Congress that the research that goes on at the centers benefits the United States as well as developing countries. The centers warrant sustained U.S. support as an "investment" in our own future, not just because they produce benefits abroad. The International Rice Research Institute's first and foremost objective is to increase yields in developing countries, stave off starvation, and keep ahead of population pressures. A second goal of IRRI and the other international research centers is to provide stability in the global grain food market, and that affects all of us.

It was I think, an interesting experience after IRRI, helping make the case that increased rice production and improved incomes in the developing world actually benefits the United States by creating opportunities for trade with Asia which was becoming a growing U.S. export market. By reducing the risk of hunger and raising incomes and well-being, the green revolution spawned by the international agriculture research centers helped create many thousands of Asian buyers for U.S. products. So, in the longer run and larger scheme of things, I advocate strong and sustained U.S. support for the international research centers.

Something else about which most of the U.S. public is not aware, is the role that IRRI and CIMMYT play as repositories for the world's genetic food grain resources. IRRI and CIMMYT along with several of the other centers participate along with the U.S., Japan and European countries in an International Treaty on International Plant Genetic Resources administered by the FAO in Rome. Treaty members coordinate the collection, labeling, storage, and maintaining of all of the rice wheat and other food grain varieties around the world. Rice varieties are warehoused at IRRI plus a couple of other locations. Wheat, maize, sorghum, millet, bean and other seed varieties are maintained by other international or national centers.

Now, the genetic resources in those facilities are available to any country in the world including the United States. Back when I was a research scientist at IRRI, I often would rub shoulders in the Center's cafeteria with visiting agricultural scientists from some of the large U.S. grain companies that periodically sent representatives to take a look at what new varieties were being developed.

IRRI's first breakthrough for the green revolution was a cross between a short-stemmed wild Chinese variety of rice and a long stemmed full grain variety from Indonesia. It was those two varieties that launched the green revolution. Those parent seeds are now part of that collection of what is now I believe over 50,000 rice seed varieties that are housed at the Rice Research Institute. Those are the kinds of things I think a USAID development officer is not really unaware of until there is a chance to be part of that research environment. So, the year that USAID gave me to work at the International Rice Research Institute and to experience this type of activity first hand was an extremely rewarding and broadening one that later proved valuable in helping get the message out to the broader U.S. community that things the Agency has supported over the years were producing benefits not only for the developing world but also for the United States.

Q: Let's talk about farming systems research. It's my understanding that farming systems research looks at farm entities in their totality and at the interactions of all their production activities. I recall that farming systems research was in some disrepute; people were challenging it as not effective because it was so difficult to carry out in developing country settings. What is your thinking?

CHURCH: Farming systems research does indeed examine the way farmers organize their activities and as a result certainly requires more time, skills and resources than single commodity research. But in Asia there is really little other choice given that farms generally involve several crop and livestock enterprises. At IRRI, of course, the focus was on rice-based farming systems but using a farming systems approach, scientists examined constraints on rice production that were not just inherent in the crop itself but also in the commitments a farmer had to other enterprises or activities he managed. They looked for ways a farmer could boost yields on the land most appropriate for rice, while freeing up other land to diversify into other crops and livestock enterprises. That requires taking into account how other crops compete for labor at the planting or harvesting times of rice, what added demands there are for inputs when cash is scarce, for draft animal use. The farmer has only so many hours he can work and manage his farm. Changes in his farm system must be examined with that reality in mind.

So, that means going back to the research scientists at the station and saying, hey, if we are going to improve rice yields on this farmer's land and introduce a second crop, we need to come up with a rice variety that could be planted, say, earlier in the crop year so that he has time to tend to the other crops on land no longer needed for rice. Or alternatively, there may be an early maturing rice variety or one that does well when another crop is inter-planted. Answers to those research questions will identify realistic options for increasing total production and income on the farmer's land.

This kind of farming systems research requires establishing a partnership with farmers who become directly involved in the scientific research itself by managing scientist directed trials and giving feedback about what works for them and why. Farming systems research is much more pragmatic than experiment station research. The limitation of farming systems research is its very labor intensive demands on research scientists. It requires the training and equipping of a very large staff of energetic and committed scientists with the resources to get off the station and work with farmers.

Many developing country governments, however, don't have the budgets or staff to conduct research trials in farmers' fields. I can recall bouncing around the countryside for sometimes a half a day to get to one farmer's field where research trials had been set up. Well, you can't cover many plots when you are doing that. As a result you can only set up a few field trials which reduces the statistical reliability in your research findings. Thus there are some limits to how sound the research results will be even if the conditions more closely approximate reality than do those on research station plots. The tradeoff between real world settings and statistical reliability of research results is clear.

Moreover, research and development biases can creep into farming systems research. For example, it is not unusual to find that farming systems research scientists tend to gravitate to those farmers that are slightly better off, the ones that can invite them in for tea or give them a bed for the night or feed them, this sort of thing. They set up their experimental plots on the land of better-off but not representative farmers of the regions where they are working. As a result the better-off farmers reap a disproportionate share of the benefits of farming systems research. The outcome is that research does not always benefit the poorest who need it the most. So, the farming systems research method is prone to introducing biases against some of those farmers who could benefit the most.

Q: It is a range of disciplines I suppose. It is not just one researcher.

CHURCH: Farming systems research not only gets research scientists into the farmer's fields, but also gets geneticists talking to plant engineers talking to economists talking to plant pathologists, etc. That works at a major international research center with a critical mass of scientists. But in developing Asian countries, the farming systems research method places a lot of demands on the few available scientists and limited research budgets with which they have to work.

There has always been interest in trying to improve farming systems research methods, but there have been some serious questions about its appropriateness for developing country research systems. It is often viewed as a luxury approach to research as opposed to the more pragmatic, day-to-day research that generally goes on in a developing country context. I am a firm believer that it works. I've seen it work. I've seen the enthusiasm of participating farmers, but I'm also aware that there are some biases toward the spread of the benefits that farming systems research can generate, and there are some definite limits on the capacity of such programs to deliver in resource scarce developing countries.

Q: Any more you want to add about the year at IRRI?

CHURCH: Well, I recommend that USAID technical staff consider seeking a similar experience at some point in their careers to get a perspective on their work from a totally different institutional setting. My "sabbatic leave" year at IRRI was very rewarding from that standpoint. It reinforced a number of things that I had come to believe but was maybe a little too timid about expressing or promoting. The experience also introduced me to new development issues that helped guide me during the second half of my USAID career. I'm glad the opportunity came along and that I chose it rather than come back directly to Washington, DC after 12 years overseas.

Assignment to the Bureau for Science and Technology in USAID/Washington (1981-87)

Q: Well you left IRRI in what year?

CHURCH: I left IRRI in the fall of 1981, in time to get our kids in school in the Northern Virginia suburbs of Washington, DC. where we had bought a home a few years earlier. My wife, Connie, and I had started a family overseas. Our son, John, was born in 1973, and our daughter, Adriana, was born in 1976, both in Guatemala. They were young children in Bangladesh and the Philippines, and while they got very good schooling overseas, they called themselves "Americans" but had yet to live in the United States. They needed some cultural roots of their own. It was finally time for us to come back to the U.S. as a family for awhile.

And for me, the USAID personnel computers revealed that after 12 years in the field, I was due for a tour in Washington, DC; what we overseas referred to as the Agency's only true hardship post! We still would miss living abroad. Aside from all the opportunities to travel that overseas living offered, we could also enjoy a worry-free home life thanks to all the support that the USAID and Embassy administrative services provided in housing, furnishings, medical and other logistic support. Overseas we also enjoyed the luxury of having domestic help at home. (I can report as a father I have raised two kids without having to change a single diaper thanks to the domestic help we had in places like Bangladesh and Guatemala.)

My wife had started a correspondence course in accounting while we were in Bangladesh. She was a history major from Stanford University, and it really didn't give her a lot of career options abroad. She did have a number of part time jobs as a spouse in Bangladesh and in the Philippines, but really felt she wanted more of a career of her own. So for her, coming back to the United States was a opportunity to get some formal accounting course work at George Washington University in the District and obtain a CPA [certified public accountant] and then a masters degree of Accounting during the period we were back in the United States.

Q: What was your USAID assignment in Washington, DC?

CHURCH: I headed up the Agriculture Policy Division of the Office of Agriculture in USAID's Bureau of Science and Technology. I had essentially two large projects to oversee with a staff of six development economists. One that was already in place was a global farming systems research support project implemented by the University of Florida. The project aimed to spread the farming systems research "gospel" to other USAID country programs, particularly in Africa and Latin America. The other was a new economic policy reform project initiative to support USAID country programs aimed at getting governments out of intervening in agriculture markets with subsidies and price controls.

The two projects built very nicely on my personal overseas experience. They also were very complementary. For example, USAID evaluations were revealing that it was futile to put money into agricultural research, if there were price controls that discouraged the very crop production that the research supported. In some cases, which really alarmed us from an environmental standpoint, we found farmers were removing forests on steeper and steeper hillsides because subsidized fertilizer made it profitable to cultivate these marginal lands. However, with the trees removed, the hillsides were subject to erosion and the lower valley irrigation systems were filling up with silt from that erosion. Subsidized inputs were promoting agricultural practices that were degrading the environment and were not sustainable. Working in Washington provided the opportunity to bring together two themes in my career, sound market incentives and appropriate agricultural technologies.

Q: The policy project, where was it the most active and what were the most important breakthroughs you felt you were able to accomplish for the project?

CHURCH: The major challenge in the policy area was demonstrating convincingly the consequences of pursuing policies that actually were counterproductive. I mentioned earlier fertilizer subsidies in Bangladesh. That certainly was one. Price controls on basic food crops were a second concern. Many developing countries feared that without controls, the prices of urban food supplies would soar. More than one government has fallen by popular protests over rising bread prices. Our challenge was to show that relaxing price controls would increase incentives to produce more, which in turn would act to dampen the effects of any price increases in the long run.

Most of USAID's economic policy work in agriculture was directed toward input pricing issues: low interest rates on farm credit, subsidized prices for chemical fertilizer, pesticides and irrigation water. There were three goals there. One was a fiscal goal to keep governments solvent by reducing budget-busting subsidies. A second goal was to provide resources to assure efficient input delivery. For example, free water often meant that irrigation systems weren't maintained for lack of operating revenue, and cheap credit meant that rural banks eventually went bankrupt and closed down because they could not cover their operating costs from their small interest rate spreads. Third, was the goal of equity. Subsidized fertilizer, for example, most often went not to poorer remote farmers but to the richest farmers with the most local power and influence.

Q: Any particular country where you found this receptive or was it hard to tell?

CHURCH: Our challenge was first to educate USAID field missions to these realities, then to help them win over their developing country counterparts. In many cases, USAID missions were taking the expedient approach of helping governments subsidize fertilizer or credit to get farmers to use them. While this produced some results in the short run, it was not sustainable over time, nor did it reach some of the most needy of farmers. I will grant that it is hard to distinguish between the impact of our project and the impact of budget realities, but either way, these inputs are subsidized much less today than in the past. And governments now have in place the capacity to better assess just who is benefitting from these services and who isn't.

Q: Do you have an example of those things that worked?

CHURCH: I pointed already to the Bangladesh fertilizer experience. There were others: reduced use of subsidized credit in the Dominican Republic where USAID introduced a graduation scheme for moving farmers to commercial borrowing; in Indonesia USAID participated with other donors in promoting integrated pest management (IPM) as an alternative to unchecked use of subsidized pesticides.

Q: What did you find were the principal reasons or factors that worked against making these policy changes in agriculture?

CHURCH: A lack of clear information to determine cause and effect certainly was a factor. USAID has not really invested much in measuring the impact of the policy changes that its programs have fostered, particularly in agriculture. USAID mission staffs were rewarded for how fast they could get program money obligated and funding pipelines drawn down. Less recognition is given to what programs have accomplished, partly a result of the fact that by the time impact is evidenced most mission staff have moved on to other country assignments. So, little time and attention is given to gathering baseline data and monitoring the progress of projects in terms of the impact on participants. This is one of the things the policy project attempted to do... to measure and document some of our program accomplishments. We funded case studies of particular initiatives that USAID had implemented over the years to determine just how much of an impact they had. We made up for the fact that most agriculture projects seldom included sufficient funds to benchmark and track the impact of their activities.

We weren't always popular for the conclusions we reached from these impact surveys. It's never easy to tell a USAID project officer his or her program is not producing desired results, or worse, that it is further aggravating the situation because, say, big and rich not small and poor farmers may be benefitting most from our support. We comforted ourselves, though, in knowing that we were helping to make it harder for people to make bad decisions. Of course, USAID funded programs for political, often "cold war," reasons at the time. At least we could help those making such decisions by demonstrating what economic and social costs of such programs might be. As a result, I think we did prevent some bad decisions from being made, and we did stop USAID from dumping money into some of these programs that were not sustainable, that were not reaching intended beneficiaries.

Q: You also directed USAID's global farming systems research program. Approaching it on a global basis, is there anything particularly different about its characteristics?

CHURCH: One thing I found interesting was the receptivity to the farming systems research methodology in Africa. It was not all that popular in Latin America, perhaps because the region already had more developed, and somewhat entrenched, research establishments in place. In Africa, where research systems were less mature, farming systems approaches appeared more welcome. Also, in Africa there is no dominant crop in many settings. So, as a necessity you almost had to address a variety of farm crop and livestock enterprises in order to have any impact.

Q: Do you have some examples or instances where it took hold?

CHURCH: You see it more in East Africa in places like Kenya, in Malawi, in Zambia, where agriculture research programs are built almost exclusively around a farming systems approach. It certainly isn't widespread among developing countries, but where there has been a concerted effort over a sustained period of time, I think it has led to an entirely new type of institutional framework that probably will prevail. But in Africa, agricultural research, like most development efforts, takes a long time to evolve into something substantive and sustainable.

Q: Were there any other particular lessons or themes that have come out of farming system research work apart from those we have already talked about?

CHURCH: Well, my sense is that the Agency, in its current configuration with smaller staffs and more limited budgets, could do better by pursuing these kinds of agricultural research initiatives through already existing international frameworks like the international agriculture research centers. I would argue that sustaining an international research network to carry out some of these programs in developing countries is probably more effective than attempting to mount these kinds of initiatives independently in every country where USAID has field missions. We might provide some country level support through training grants to send people to the centers for skills upgrading and to integrate our U.S. land grant agricultural universities into the global research system. I'd even encourage USAID to leave logistic support for vehicles, equipment, etc., to the international banks to fund. I think USAID is probably better positioned to support agriculture policy work than it is to work in food crop production technology development and dissemination.

Q: In your work with farming systems research over the years, were there any common findings from the research or lessons that stood out for you no matter where you did it?

CHURCH: Farming systems research is very site specific. That is perhaps the only common theme right there. Research must be tailored to the particular setting and resources. In my view farmers, even poor farmers, apply their own version of the scientific method of hypothesis testing. They constantly test to see if new seed or different cultivation practices work better than before. We don't give small farmers the credit they are due in their roles as "applied scientists." The only difference is they must live from their experiments. Farming systems research, where I've seen it applied systematically and conscientiously, has achieved significant returns through farmer involvement in the process. It takes a longer time to get reliable results and the results may be very location specific. Still, while scientists could double crop yields in experiment station trials in less than half the time than to do so in farmers fields, there is no guarantee that experiment station results will work as well in the real farming world.

There are a number of benefits from this approach. It gives the researcher a better understanding of the realities of farming. It also gives farmers a more immediate opportunity to draw on and respond to what works and what doesn't work. Granted, it may slow down the research process and introduce a lot of variables that make it hard for a scientist to talk about the qualities of a new variety or a new practice. Application of the scientific method to field trials is also more complicated in a real world setting. It may draw out the results, but at the same time you may get a better product. So there is a trade off there, time versus reliability versus reality.

The willingness of a donor agency like USAID to stay the course is also important. If a donor is not willing to support this type of research activity for at least a couple of decades, it should not begin in the first place. USAID and other bilateral and multilateral donors have funded an impressive international agricultural research and genetic resources infrastructure out of the green revolution and fears of global famine in the 1950s and 1960s. It is a system that has proven that it works. It warrants continued support. There should be a clear awareness that these programs are essential to global survival to assure that we have the best knowledge to meet the next challenges to come be it a new generation of crop disease or pest or changed environmental conditions.

On detail with the Office of the U.S. Trade Representative (1987-88)

Q: Did your USAID tour in Washington offer any other experiences?

CHURCH: During the last year of my Washington tour I arranged a detail from the Agency to another branch of the U.S. government, the Office of the U.S. Trade Representative (USTR) in the Executive Office of the President. The USAID Administrator at the time, Alan Woods, had just come from the USTR and was looking for representation by someone from USAID, who had developing country experience, to serve on the United States delegation to the General Agreement on Tariffs and Trade (GATT) in the "Uruguay Round" of trade negotiations. The United States was attempting to exercise some leadership in the negotiations on agriculture trade and sought developing country support. Unlike any of the previous trade negotiation rounds which were very much oriented toward industrialized countries and trade in industrial goods, the Uruguay round had a much broader, more ambitious agenda. The negotiations were expanded to involve developing countries in a major way for the first time. In addition to industrial goods, the negotiations also took on trade in agricultural commodities and services as well as trade related investment measures and intellectual property rights. In agriculture, besides tariff and other trade restrictions, domestic subsidies and production controls were on the negotiators' agenda.

The U.S. objective was to assure that the negotiations did, indeed, address phasing out domestic policies which the U.S. government argued led to distortions in agricultural trade. The agricultural negotiations were dominated by surplus-producing countries in the European Community and the United States and by countries which heavily protected their farmers like Japan. The United States wanted to gain developing countries as our allies in its efforts to remove price supports in foreign markets where it felt American farmers could compete. The U.S. team needed help in communicating its concerns to the developing country GATT member, whose votes it sought in crafting a final GATT agreement.

Q: What was your role?

CHURCH: I put together initial draft procedures for how the U.S. negotiators should recognize the special interests of developing countries in any agreement to phase out trade tariffs and domestic subsidies. Agriculture was one of the more contentious issues in the negotiations. Resolving domestic policy issues was a key element for a successful GATT Uruguay Round negotiation. Working in the USTR provided me an opportunity to communicate the special concerns of the developing countries to members of the U.S. negotiating team.

Q: What were the main issues that you faced in that process?

CHURCH: The main issues we faced were what should be on the bargaining table and what should not. This was the first time that international agreements would essentially intrude upon what were considered domestic issues and national sovereignty. Many GATT member countries had expressed concern that opening the door to domestic price policies would involve further erosion of sovereignty among a number of trading partners. Recognizing the link between domestic agricultural support policies and international trade was, I think, a major education process. We spent a lot of our time building our case meeting with American farm commodity producers' associations to win their endorsement for the U.S. negotiating position.

We also invested a great deal of time building a case to demonstrate the U.S. position that a liberalized agricultural trading system offered benefits to all participating countries. This presented a tremendous measurement challenge because we were not only seeking to calculate the distributive benefits - how much each trading country gains in the short- run from more open markets, but also the dynamic benefits of more efficient long-run production resulting from a liberalized trading system.

The short-run distributive gains are rather straightforward. If tariffs are eliminated, one can compute the benefits as value of the resulting increased trade at the new set of prices. It is a onetime gain from removing trade distortions and allowing the market to allocate production and consumption where new prices dictate.

The other longer term gain from trade is more difficult to measure. The removal of tariff barriers and subsidies also encourage new investments in agricultural production in the most competitive countries and consequently a more rapid growth in global trade than would occur under a more restricted trade regime. That added benefit from more efficient global markets and from more productive investments produces still further benefits in the longer run by putting international agricultural trade on a higher growth path. That is a very difficult concept both to measure and to communicate to essentially nontechnical political decision makers involved in the trade negotiations.

Bear in mind that developing countries obtain a large share of their annual budget revenues from the duties they charge on imports and exports, and we were asking them to remove these duties as part of their participation in the process. They did not have in place alternative measures like an income tax that could take up the slack. Still, we could show that it was self-defeating to charge duties on imports and then turn around and give that revenue as subsidies to producers when a country could get rid of those duties and get rid of the subsidies without making its fiscal house any worse off. Plus there would be the benefit of providing a more efficient set of market price incentives that would lead to more productive use of resources and a more competitive position in domestic and international markets.

Q: How did the negotiations come out? Were you involved in that?

CHURCH: I moved back overseas with USAID before the Uruguay Round trade negotiations were completed. From an overseas perspective, it was apparent that while few questioned our arguments, some doubted the reliability of some of our numbers. A GATT agreement finally was reached to reduce domestic subsidies and production controls over a number of years but understandably it was more modest than the aspirations of the U.S. negotiating team. I think we did engender strong interest in both government and academic circles to gather better data to assess the impact of trade liberalization that is taking place as a result of the agreement. Without better statistics we are at a loss to determine the impact of agricultural trade liberalization on job and income growth and on overall productivity in GATT member countries.

Like my sabbatic leave at IRRI, my detail to the U.S. Trade Representative's Office was a rewarding and intellectually broadening experience. I don't know any other Agency of the federal government that provides such opportunities for its staff. I was very fortunate to work out those two arrangements to broaden my perspective on economic development.

Assignment to the Afghanistan Program (1988-91)

Q: What was your next assignment?

CHURCH: Following my detail to the Office of the U.S. Trade Representative, I was again eligible for an overseas assignment. This time I needed an assignment to an overseas USAID post where there was a high school for our kids, work opportunities for my wife, and, of course a career challenge for me. I found that as I progressed through my foreign service career with the Agency and through raising a family at home, I was encountering a situation that confronts a lot of us as development assistance specialists: a growing tension between professional and personal goals. My kids were getting more and more settled into the United States setting and were reluctant to go overseas. My wife had finished her own CPA studies and had a nice job. Our parents were aging and wanted to be close to their grand children. We were pretty much settled into stateside living, and there were a lot of reasons to stay put in the U.S. It was a little hard to go overseas again.It's unfortunate to hear myself say that because here I was career-wise at the peak of my professional capabilities, with a broad understanding of development concepts, good field experience with what works and what doesn't work. It's probably the best time in the world to be overseas from the standpoint of contributions a seasoned development officer can make. But, from a family standpoint it was probably the most difficult time given the age of our kids and the career interests of my wife. Where development officers are needed most is in the poorest countries. But those are precisely the countries that lack adequate schools and have the fewest job opportunities for spouses, and very often where USAID has smaller missions with less technical positions in agriculture, health, education, etc. The developing world becomes pretty small when mid-career USAID officers require a post with a high school for their kids and job opportunities for their spouse.

The USAID Afghanistan program in Pakistan at the time offered a way of meeting all those needs for our family. The U.S. government was helping a rebel government in exile in Pakistan prepare itself to return to what was Soviet-occupied territory. The Soviet Union had pulled its troops out of Afghanistan, but fighting continued between forces of the puppet regime they left behind and the muhajideen freedom fighters of the Afghan resistance movement that the West continued to support. The country was strewn with land mines and its damaged road, power and irrigation infrastructure combined to make development work very difficult. It wasn't possible for "official" Americans to go into the country so the program had to be run out of Islamabad, Peshawar, and Quetta in Pakistan. Still in retrospect, working in Pakistan on the Afghan relief and rehabilitation program turned out to be a good choice. Pakistan's capital, Islamabad, where we were based had one of the best international overseas high schools among USAID assisted countries. My wife had opportunities to work for other USAID contractors, and the Afghan program certainly was unique and challenging.

Q: What was the position?

CHURCH: I was Deputy Director of the Afghan Agriculture Program Office and responsible for running a program to smuggle wheat seed and fertilizer into Afghanistan to help resettle areas of the country under Afghan "muhajideen" rebel control.

Q: How big a staff did that call for?

CHURCH: The Afghan program was very small. We had about 12 USAID American staff and an equal number of local contractors and consultants. But we covered just about all the development sectors - agriculture, heath, education, infrastructure building. Those of us engaged in the agriculture program focused on getting Afghan food crop production restored again. We bought seed and fertilizer on the world market had it shipped to port in Pakistan and warehoused in Karachi. We then engaged truckers to move it to the Afghan border where it was off loaded into smaller vehicles, or in some cases pack animals, and carted across the mountains through the historically infamous Khyber Pass into Afghanistan to be sold to farmers who were trying to reestablish their former way of life after more than a decade of fighting in the Afghan resistance. We also had programs to supply food to workers restoring roads, bridges and irrigation systems that were critical to get commercial life going again in rural areas. Because most of the draft animals had been killed, we also had a program to bring in breeding livestock.

Many of the Afghan farmers we were trying to reach were in their mid twenties and had left farm families when they were young boys of 14-15 years to pick up a gun to fight in the "muhajideen" resistance forces against the occupying Soviet forces. They had been driven from their villages and really had lost most of their farming skills during more than a decade of resistance struggles. These younger Afghans not only needed to get seed and fertilizer but also know-how to get crops growing. Orchard crops like raisins and grapes, cumin and spices that were grown in the country required several seasons to be reestablished after being abandoned by the war. But Afghans needed to eat in the meantime, so our emphasis was on food crop production. In 1988 after the Soviets pulled out, more than 4 million Afghans, mostly women and children were still sheltered in refugee camps in Pakistan and Iran waiting to return. United Nations agencies and other donor programs could not sustain them indefinitely. Our job was to get food crops planted so entire families could return home and rebuild their lives. We really did not have much time to think about development. We were part of a huge multi-donor humanitarian relief and rehabilitation effort.

Q: How could you manage a program not being in the country, or did you visit the country?

CHURCH: Our programs operated out of two Pakistani towns, Peshawar and Quetta which bordered Afghanistan. Our staffs were Afghan, many well educated, skilled and "westernized" who were gravitating back to the area and were anxious to see some sort of peace and prosperity return. We recruited and hired many of them to implement USAID programs. We expected many of them would make up a future Afghan government. So in a way we were supporting a government in exile that was implementing USAID programs as well as programs for other donors. The Ministry of Health, for example, consisted of two nongovernmental organizations (NGOs) who hired all the Afghan staff that USAID hoped would soon return to Afghanistan's capital, Kabul, and form the public agencies of a new democratic government.

One of the challenges we faced was coordinating all of the donor assistance and all of the NGOs to get some semblance of organization out of the program. Too often, donors and NGOs ended up hiring qualified Afghans from each other. The USAID Afghan program was unique in that USAID was just one player and often not the dominant player among many donor and humanitarian relief groups assisting the Afghan population. One of the largest players was the United Nations High Commission for Refugees (UNHCR) which attempted to coordinate and deliver support to the two million Afghans in Pakistani refugee camps.

Q: What was the expectation when you were working there, of where this would evolve?

CHURCH: In 1988 when I arrived the U.S. government anticipated that within a year after the Soviets pulled out, the puppet regime would soon collapse and a pro-western transition government would be established that would welcome assistance programs back into the country. (Remember USAID had conducted a full development assistance program in Afghanistan since the early 1960s and up to the mid 1970s when the Soviets invaded and occupied the country.) So USAID was positioning itself in Pakistan to return to Kabul and help rebuild the country.

We had equipment and staff standing by in temporarily rented facilities in Pakistan running programs in exile while waiting for that moving date to come. After three years and what turned out to be an intervening evacuation from Pakistan by our families during the Gulf War, I decided that there really wasn't much chance for such an Afghan assistance program any time soon, so I chose to move on.

Q: Did you have any dealings with members of the Afghan government in exile?

We also set up one of the first high tech "geographic information system" (GIS) entering data into computerized digital maps from a series of satellite images that we were able to obtain from the French and from one of our closest allies in this program, the United States Central Intelligence Agency (CIA), who had been remotely monitoring Russian movements inside Afghanistan for a number of years. The satellite maps had many good images of damaged infrastructure and areas in which there were crops in the crop land. We were able to get that imagery and convert it into computerized maps. We use these maps to track inventory in basically a spatial data base to keep track of and monitor changes that were occurring as a result of what we were sending into the country.

Surveys, satellite maps and GIS software became the tools we used for monitoring USAID development assistance inside a country where physically we could not set foot. I was impressed to see how easy it was to train Afghans to use sophisticated satellite imagery and calculate, from hand- held global positioning system (GPS) units, their positions inside Afghanistan to report what were physical conditions on the ground. The Afghans we were able to recruit for the program definitely had solid technical skills. Of course, it was very encouraging and exciting to see Afghan exiles, American Afghans, French Afghans, all of the Afghans that had been spread around the world during the Soviet occupation, joining efforts to try to bring the country back together again.

Q: Did you find the program useful?

CHURCH: It was the right program but not the right time for it. The Soviet puppet regime in Afghanistan proved more resilient than expected - though it eventually did fall - and the more fundamentalist leaders of the Afghan resistance proved to be too divided. As for the USAID staff itself, we got caught up in events from another part of the world when, as a precaution during the Gulf War, American families were evacuated from all Muslim countries including, of course, Pakistan. We brought our families back to the United States, found temporary housing and attempted to run the program even more remotely from Washington, DC for nearly a year. My son at that particular time was applying to college. He was in his senior year. He wanted to finish high school back here in the United States. When we were allowed to return to post, I ended up leaving my family in the United States, going back to Afghanistan for a few months, closing out our personal affairs, and moving back to join them.

It was apparent USAID would not be going back into Afghanistan any time soon. Fortunately, many of the NGOs were taking more of a central leadership role in our programs and doing very well with very little USAID supervision. USAID essentially decided to wind down its efforts in Pakistan as much for lack of progress in Afghanistan as for lack of Pakistani cooperation with the U.S. on issues related to narcotics interdiction and nuclear non- proliferation. So, it became a situation where the United States wanted to have a much reduced presence in the area.

Assignment to USAID's Office of Evaluation in Washington D(1991-1995)

Q: After that you came back to the U.S. What year was that? What was your assignment?

CHURCH: I returned to the Unites States in the fall of 1991, about a year after the Gulf War ended. During the evacuation period when I was working in Washington, D.C., I learned about USAID's plans to expand the Agency's evaluation work under the Bureau for Policy and Program Coordination (PPC). John Erickson at that time had just come in from the field where he was Mission Director in Thailand and Sri Lanka I believe, to take over PPC's Center for Development Information and Evaluation (CDIE). He was interested in building USAID's capacity for conducting global impact evaluations of country programs in an effort to distill lessons that the Agency might learn from nearly 30 years of overseas economic development assistance work. He offered me a position in CDIE's evaluation office heading up a new series of impact assessments of Agency environmental programs.

So I came back to Washington where I spent the last five years of my USAID career. In retrospect, it was a good way to wind up an interesting 25 years of USAID international development work. There aren't many who have the opportunity to spend the last few years of their career in the Foreign Service reflecting on some of the broader development challenges.

In all my years in USAID, I never worked in what I call the last step of the project cycle - evaluation. Anybody who comes into the agency understands that the Agency works through projects. In its simplest form, the project cycle has four steps: 1) analysis of the problem; 2) design of an intervention to correct the problem; 3) implementation of a program to solve the problem; and, 4) evaluation of the results.

We actually organize a lot of our daily living around this project model without being aware of it. When I've trained new development officers in project management, I have used the example of going to the movies. Whenever we go to the movies we first look at the papers and decide what movies are playing, where and at what time. That's Step #1, information gathering and analysis. Then we came up with a plan - who's going, in whose car at what time, dinner before or after, etc. That's Step #2, design and development of a plan. Then we put that plan into practice; we go to the movie and dinner and enjoy ourselves. That's Step #3, implementation of the plan. Afterwards, we sit and talk about the evening - did we really enjoy the movie; was it too crowded at the time we went, could we have gone at a different hour at a cheaper price for a better seat, etc.. That's Step #4, evaluation. The project cycle is something we do unconsciously on a day-to-day basis, and in development work we do it the same way on a much larger scale.

USAID evaluation work is really fascinating. It's applied research. Unfortunately, USAID project evaluation, because it is left till last, is too often left out of project work altogether. When I arrived in USAID's evaluation office, the Agency was getting serious about better evaluation of the impact of its programs partly because Congress was pressing USAID to demonstrate that foreign aid dollars were producing results. Accountability was becoming a key concern across the entire federal government and particularly in U.S. foreign assistance programs. The disintegration of the centrally planned economies of Central Europe and the breakup of the Soviet Union had removed the pretext for giving money to developing countries to win friends in the "cold war." As we moved into the decade of the '90s, we found a great deal more attention was being focused on whether our programs were having an impact on intended beneficiaries - were crop yields and farm incomes increasing and for whom as a result of our assistance. So USAID needed to come up with much sounder and objectively obtained evidence of the impact of its programs.

Project and program evaluations became a very critical component of development assistance activities in the 1990s. It was a fascinating time. There was so much more information available about the impact of USAID programs than when I joined the Agency two decades earlier. First, however, we had to come up with a sounder evaluation methodology than the Agency had employed in the past, partly because we were being asking more difficult and pointed questions. For example, the question of attribution - the extent to which we could trace a change back to assistance provided by the U.S. government through USAID - was complicated by the fact that the Agency was not the only donor in many country programs. To what extent could we find USAID's fingerprints on programs in which the Agency was only one partner?

Another issue was the question of effectiveness. Did USAID pursue the best approach in coming up with a result? Could it have saved money or time by pursuing another course of action? For example, USAID programs to encourage food production offer several strategies for achieving that goal - investing in research and technology, funding production credits, training extension workers, encouraging better market pricing policies. But which is the most cost effective way in a particular setting? The last few years I was with USAID, I had an opportunity to contribute evaluation methodologies to measure results and document the Agency's experience for future generations of development assistance officers.

Q: Describe a couple of those evaluation studies and how you carried them out.

CHURCH: We started off by looking at programs in what we called "sustainable agriculture", that is, small farm assistance programs that wouldn't lead to environmental degradation. For example, USAID's subsidized fertilizer programs in the past had made farming marginal lands profitable. But the result often was cultivation on hillsides that were prone to erosion and in the long-run to lower crop yields. Such agricultural programs were not sustainable. We conducted several evaluation case studies of more sustainable approaches to food production that USAID had sponsored. We looked at programs in the Philippines, The Gambia, Mali, Jamaica, Thailand, Sri Lanka for answers to questions as to how farmers had succeeded in developing production systems through inter-planting of soil-retaining trees and food crops, where they could both provide a livelihood and conserve the land in steep hilly areas.We also conducted a series of studies on conserving biological diversity through USAID support for setting up parks and protected areas in countries like Nepal, Madagascar, Jamaica, Thailand, Costa Rica, and Sri Lanka. Our goal was to identify ways to protect biological resources in situ, as part of protected national parks, while at the same time providing a livelihood for members of communities in and around those areas who previously had made a living by hunting, farming, fishing or logging inside those protected areas. Our objective was to find ways to provide alternative sources of income from national parks by converting hunters into tour guides and loggers into nature lodge employees.

One of the most salient findings of these studies was that success is directly tied to the degree in which local individuals and communities were involved in the development program. USAID is now doing a lot of this in the environmental area where we are concerned about conserving biological diversity and villages around parks and protected areas. If we don't include those affected when setting up a wildlife refuge or protected area, they are going to continue to cultivate crops, fell trees and poach animals on the land. Where we can engage local communities in planning and managing protected areas and involved them in opportunities to generate income from nature tourism and that sort of thing, then our programs have a much better chance of success.

The findings of those studies have since made their way into program guidance for USAID and its development partners. Each of these global evaluation studies synthesized conclusions across countries and have come up with recommendations for project and country level activities that are environmentally more sound than practices followed in the past.

Q: Were there any particular issues or experiences you picked up in trying to do these kinds of studies? We can see the reports and by reading them we can get the content, but in the process was there anything you learned?

CHURCH: The process of doing evaluations is a mixture of both art and science. The scientific method still applies. Sampling must be statistically sound and measurement biases must be avoided in collecting data. There is a lot of science involved in identifying representative projects and selecting representative project participants. If we cannot do that, we cannot extend our findings to the broader population of projects and settings where USAID works.

But there is also an art involved. The art begins when a USAID country mission is approached and told that one or more of its projects have been selected as part of a global program evaluation. USAID mission staff can be a bit apprehensive when somebody calls them from Washington and asks to come out and do a study in their backyard! USAID/Washington visitors inevitably place demands for time and resources on a USAID field mission. Evaluation finding potentially could either help or hurt the mission's future programs. Working with a field mission becomes a delicate diplomatic process particularly when you tell them you are coming to do an objective assessment of programs that have gone on for some time and may be an integral part of the USAID mission's country strategy.

On occasion we have wanted to go into a country at a time when the mission was trying to negotiate a new project with the government. We'd call and say we'd like to come and talk to government officials and visit old project sites. When you come from Washington and you are identified with USAID, you are perceived as part of the negotiation process whether you intend it or not. Even traveling on our own resources, working independent of the missions, renting our own transportation and office space, we still are identified with the USAID mission in the country from the standpoint of the government and locals.

Another challenge is how to conduct meaningful global program assessments with limited budgets, time and staff. Assembling teams quickly, doing the field work in a matter of weeks and putting out a report in time to move on to the next country and study requires a lot of orchestration. Looking at agriculture and natural resources programs was particularly demanding because it involved travel to more remote areas of a developing country. Traveling in the rainy season where roads are closed or blocked and it is hard to get through imposes a physical restraint on your ability to move to a large enough number of sites to get a representative sample of data that will produce a result with a confidence level high enough that people won't question the validity of what you have been doing... these are the realities we faced when doing evaluation work. Add to this, training people to follow the same methodology in different parts of the world and selecting evaluators that can get around in different languages and you can begin to appreciate the challenges that evaluations face.

Q: How did you come out on the issue of attribution?

CHURCH: In the last analysis attribution is not really the issue. USAID's most vital development strategy is "leverage." The ability to put a small amount of money into a program to leverage the use of large amounts of local resources in a more effective fashion is what the development process is about. The challenge is know how to use a small amount of development assistance to get people to do things differently and better... whether or not USAID gets credit for making things happen. This is particularly true at a time when USAID budgets and staff are shrinking and the Agency is being asked to do more with less.

If we can posit a "plausible association" between the provision of USAID assistance and development results we should be content. For example, over USAID's 30 years of economic assistance in Costa Rica, a country which has "graduated" from USAID assistance, there is a strong plausible association between USAID support and the strides that country has made on all development fronts. We can directly attribute to USAID assistance the emerging fresh vegetable or cut flower industries that Costa Rica has today. We can point to loans we have given, agribusiness loans, technical assistance, training and whatnot to those programs to the agricultural sector in the country, but it is hard to separate out USAID's assistance from other donors. Over the long run with the level of activity and the support that USAID gave to the country, we are justified in saying that there is a plausible association between what USAID contributed and the changes that have since taken place.

Q: Any other aspects of your work in the evaluation business?

CHURCH: The Agency's evaluation work afforded the opportunity to identify new directions to follow after ending my USAID career. I maintain an active interest in evaluation work. I think it is the overlooked area of development assistance. USAID's senior management appears now to recognize the value of sound evaluation and results. USAID management never constrained the evaluation work we did or asked us to modify the findings.

Remember, the Agency runs evaluation work from the Policy and Program Coordination (PPC) Bureau, which reports directly to the USAID Administrator and serves to provide unbiased information to Agency senior management. Because of where they are based in the USAID organization, evaluators are about as popular as auditors. In fact we viewed ourselves as "development auditors" in some respects, not always a popular role to play in the Agency. But, I think for those reasons, we have produced quality findings and lessons learned and quality products in which development practitioners can have a high degree of confidence that they provide some useful, constructive, and unbiased contributions to improving the state of the art of development assistance. For me an ideal way to wind up a 25 year career with the Agency was spending those last few years pulling together the USAID's experience base as a legacy for future USAID development officers.

Retired from USAID to Direct USAID's Economic and Social Data Service (1995 - 2000)

Q: You wound up in what year?

CHURCH: I finished my career as a foreign service officer with USAID in the late fall of 1995, Thanksgiving weekend to be exact. It was not an easy decision. I could have stayed on for a few more years, and perhaps gone overseas one more time. I was tempted away from the Agency, however, by the opportunity to head up a USAID contract that managed, analyzed and disseminated development statistics for USAID staff and development assistance partners. The contract afforded the opportunity to continue my interest in development work while transitioning to the private sector. It was a move that I knew I would soon need to make because foreign service careers require you to move up into management levels and away from the technical work as an economist which was my love and certainly my career preference. Conducting technical project work was also where I felt I could give most to the Agency.

I'm glad I moved on when I did. Congress and the administration soon after became locked in nasty budget battles that were no fun at all for those staying behind. In fact, shortly after I departed, the Agency had to shed itself of a number of staff in a government wide downsizing process that left many more of my foreign service colleagues on the street sooner than they anticipated. So, I was able to walk out of the office Friday afternoon as a government employee and walk in an office nearby Monday morning as a consultant to the Agency for the next five years of my contract.

Q: Because it relates to your USAID and CDIE experience, can you describe this experience after retiring from USAID and from the foreign service?

CHURCH: While I left the foreign service and USAID, I certainly view what I am now doing as a continuation of my career in international development. Now I work as a USAID contractor, rather than as an Agency employee. I'm currently employed by an economic consulting firm, DevTech Systems Inc. and direct a USAID-funded project that is responsible for managing, analyzing and disseminating the statistics on developing countries that USAID employs in its development assistance programming and monitoring. I oversee the work of a group of ten bright young economists who are very enthusiastic about using state of the art information technology to get the best possible information on developing countries to Agency decision-makers.

USAID is one of more than two dozen federal agencies around Washington DC which are responsible for managing government statistics. Other federal agencies include the Departments oCommerce, Treasury, Agriculture, anState as well as the CIA, CDC [Center for Disease Control], EPA [Environmental Protection Agency], and USTR, which use statistical data on countries around the world. Because the United States is a contracting member to many international treaties and agreements and organizations such as the UN [United Nations] system, the World Bank, IMF [International Monetary Fund], the GATT [General Agreement on Tariffs and Trade], it receives from those organizations large amounts of data on other member countries. USAID is responsible for collecting, warehousing and disseminating data that are compiled by the international development organizations like the World Bank and the United Nations. My ESDS staff manage that data in electronic data bases which we make available to development officers in USAID and to users in other federal agencies as well as private organizations and academic institutions.Managing that data requires verifying, editing, coding and warehousing that data in a uniform fashion so that it is readily retrievable for analysis and reporting. Unfortunately, every international organization has its own member countries, its own way of viewing the world. Our task is to organize the huge volume of statistical information that becomes available each year. In addition, project staff have the skills to extract the data, examine it for, say, trends over time or comparisons of performance across countries at similar development stages and prepare reports for USAID staff needing to know the impact of Agency assistance efforts.

Q: Is there a great demand?

CHURCH: We respond to phone, fax and E-mail requests from USAID's field missions and from regional and functional bureaus within USAID/Washington. We try to be the eyes and ears of our field missions as well as our offices here in Washington. We also assist private industry, academic institutions, and individuals, graduate students doing thesis research. We produce publications and maintain a web site where development statistics can be readily obtained in more consolidated and organized formats by the public at large, particularly the Agency's development partners.

Q: Which of the data banks is most in demand?

CHURCH: One of the most popular data sets we compile annually is on U.S. trade with developing countries. One of the questions Congress regularly asks is, "What has foreign aid done for American business?" "What is America's interest in foreign aid?" So, we have attempted to put together statistical information on commodity trade between the United States and developing countries by region and by groups of countries. We look for trends and emerging patterns in U.S. trade with those countries over the last two decades trying to demonstrate that developing countries are among America's growing overseas clients. For example, countries of the Asia region now take on as much importance as our traditional European, Canadian, and Australian partners.

Q: What about USAID flows? Do you track development assistance?

CHURCH: The public is also quite interested in what we call official development flows (ODF) coming not just from the United States but from other donor nations. The member countries of the Organization for Economic Cooperation and Development (OECD) - the United States, the European countries, Canada, Japan, Australia, New Zealanhave all recently declined in their levels of international giving. With reflows to these donors by developing countries paying back their debts, new net development resources are declining in growth. The multilateral donors - the World Bank and the regional development banks - make up some but not all the difference.

Q: Anything more on that you want to comment on?

CHURCH: USAID has taken a leadership role in providing up-to-date and accurate information on what is going on in developing countries. Still, we have a ways to go in getting an accurate reading of how economically or socially healthy a country is. Our tools are still relatively primitive. When you and I go for an annual physical checkup, the doctor takes our pulse, raps on our knee, takes some bodily fluid samples, and sends them off to a laboratory. At the end of the process our doctor can give us a fairly good assessment of our physical health. Well, in the development field, we still haven't got that good a handle on the best way to measure the economic, social, and political health of a country. Our equivalent of a doctor's thermometer is still very crude and poorly calibrated. And we're not really sure where to stick it to give us an accurate reading!

For example, using per capita income as an measure of development is not very accurate because it fails to account for distribution of that income and for the costs of the social services that income can buy. New and better welfare measures are evolving which are based on scores for such factors as access to housing, potable water, education, and health services. Similarly, some organizations are developing measures of democratic freedom based on scores for civil liberties, freedom of the press, rights to associate, numbers of political parties, levels of corruption and government control. But these efforts to measure the development process more accurately are still evolving.

Still, it is an exciting and interesting period in which to conduct development work to rid the world of poverty, hunger, disease, illiteracy and political oppression. Some day, I hope the next generation of USAID development officers will have reached these goals and can say, "Job well done!"

Observations on 25 years of experience in international development programs

Q: You have worked for over a quarter of a century development issues at both local and global levels. How would you compare the world's condition at the outset of your career with today?

CHURCH: The world is a better place if only because more people now have the knowledge and knowhow to live a better life. But there are also a lot more people to accommodate on this planet and that brings a special challenge to use this knowledge and knowhow judiciously and equitably and avoid the waste and mistakes that mankind has made along the way. There has been forward progress on a global scale but this is no time to be complacent about those gains. Gains can evaporate quickly.

It has fallen to the United States to play a leadership role in international development. In war and in peace the United States has shown it is prepared to make the sacrifice. My concern is that we can get too complacent, neglect the "silent" wars that need fighting against poverty, hunger, illiteracy, disease, political oppression and environmental degradation. We aren't just giving resources to the rest of the world; we are making investments in our own future.

We have a common global responsibility to maintain this planet as an acceptable place where all can live. Reduction of poverty in the developing world is just one of those aspects of fix up and patch up a world that is still in a state of disrepair. I look at our U.S. involvement in ongoing international development work as critical to a sustainable global future. We are the leaders as well as the doers.

Q: This has been an excellent interview. Thanks.

CHURCH: It has been a pleasure.

End of interview